

## Refine Search

### Search Results -

| Terms      | Documents |
|------------|-----------|
| L28 and L6 | 1         |

**Database:** US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Search:**

### Search History

**DATE:** Tuesday, February 21, 2006 [Printable Copy](#) [Create Case](#)

| <u>Set</u><br><u>Name</u> <u>Query</u>   | <u>Hit</u><br><u>Count</u> | <u>Set</u><br><u>Name</u> |
|--|----------------------------|---------------------------|
| side by<br>side  |                            | result set                |
| <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES;<br/>OP=OR</i>   |                            |                           |
| <u>L29</u> L28 and l6  | 1                          | <u>L29</u>                |
| <u>L28</u> L27 and l2  | 29                         | <u>L28</u>                |
| <u>L27</u> l24 or l25 or l26   | 68                         | <u>L27</u>                |
| <i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>   |                            |                           |
| <u>L26</u> (4598788   4834205   5267160   5076381   4768602   5019982   4730839  <br>5671143   4597462   5700073   4527654   5159553   5333058   4961144  <br>4828061   5001636   5001637   4836319   5313389   5742917   4572316  <br>4947327   5018070   5064013   5869753   5145022   4418780   4522417  <br>5274576   5285390   4566710   4767588   4441572   5156229   4878557  <br>4552239   5097918   6161905)![PN] | 38                         | <u>L26</u>                |
| <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES;<br/>OP=OR</i>   |                            |                           |
| <u>L25</u> ('5502639'   '6708088'   '4720790')[ABPN1,NRPN,PN,TBAN,WKU]   | 6                          | <u>L25</u>                |

|   |       |            |
|---|-------|------------|
| <u>L24</u> ('5502639'  '6708088'  '4720790')[URPN]                            | 26    | <u>L24</u> |
| <u>L23</u> l16 or l17   | 3     | <u>L23</u> |
| <i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>                                |       |            |
| <u>L22</u> ('5589815')[URPN]  | 17    | <u>L22</u> |
| <u>L21</u> L20 and (tim\$ near2 averag\$)                                     | 1     | <u>L21</u> |
| <u>L20</u> 5589815.pn.  | 1     | <u>L20</u> |
| <u>L19</u> L8 and (tim\$ near2 averag\$)                                      | 0     | <u>L19</u> |
| <u>L18</u> L17 and (tim\$ near2 averag\$)                                     | 0     | <u>L18</u> |
| <u>L17</u> L16 not (L8 or L15)  | 3     | <u>L17</u> |
| <u>L16</u> L13 and (701/36  701/41).ccls.                                     | 3     | <u>L16</u> |
| <u>L15</u> L14 and (tim\$ near2 averag\$)                                     | 1     | <u>L15</u> |
| <u>L14</u> L13 and (steer\$ near2 angle).clm.                                 | 19    | <u>L14</u> |
| <u>L13</u> L12 and (left\$ with right\$ with wheel\$)                         | 25    | <u>L13</u> |
| <u>L12</u> L11 and accelerat\$ and (yaw near2 rate)                           | 32    | <u>L12</u> |
| <u>L11</u> L10 and (ratio\$ with (turn\$ or rotat\$) with angle)              | 132   | <u>L11</u> |
| <u>L10</u> L9 and (front\$ with rear\$)                                       | 886   | <u>L10</u> |
| <u>L9</u> L2 and @ad<=20021029  | 1554  | <u>L9</u>  |
| <u>L8</u> L7 and (rotat\$ with angl\$).clm.                                   | 1     | <u>L8</u>  |
| <u>L7</u> L6 and (steer\$ near2 angle).clm.                                   | 7     | <u>L7</u>  |
| <u>L6</u> L5 and (angl\$ with turn\$ with ratio)                              | 9     | <u>L6</u>  |
| <u>L5</u> L4 and @ad<=20021029  | 190   | <u>L5</u>  |
| <u>L4</u> L3 and accelerat\$ and (yaw near2 rate)                             | 212   | <u>L4</u>  |
| <u>L3</u> L2 and accelerat\$ and (left\$ near2 wheel) and (right near2 wheel) | 383   | <u>L3</u>  |
| <u>L2</u> ((steer\$ near2 angle) with sens\$) and (rotat\$ with angle)        | 1747  | <u>L2</u>  |
| <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR</i>  |       |            |
| <u>L1</u> steer\$ near2 angle   | 30194 | <u>L1</u>  |

END OF SEARCH HISTORY

## Hit List

|               |       |                     |       |          |           |
|---------------|-------|---------------------|-------|----------|-----------|
| First Hit     | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs |
| Generate OACS |       |                     |       |          |           |

### Search Results - Record(s) 1 through 1 of 1 returned.

1. Document ID: US 4951207 A

**Using default format because multiple data bases are involved.**

L29: Entry 1 of 1

File: USPT

Aug 21, 1990

US-PAT-NO: 4951207

DOCUMENT-IDENTIFIER: US 4951207 A

TITLE: Method for controlling the front wheel steer angle

DATE-ISSUED: August 21, 1990

INVENTOR-INFORMATION:

| NAME               | CITY    | STATE | ZIP CODE | COUNTRY |
|--------------------|---------|-------|----------|---------|
| Furukawa; Yoshimi  | Saitama |       |          | JP      |
| Takei; Akihiko     | Saitama |       |          | JP      |
| Ishida; Shinnosuke | Saitama |       |          | JP      |
| Oono; Nobuyuki     | Saitama |       |          | JP      |

US-CL-CURRENT: 701/42; 180/446

|      |       |          |       |        |                |      |           |           |             |        |     |         |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|---------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KMC | Drawn D |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|---------|

|            |                     |           |          |           |               |
|------------|---------------------|-----------|----------|-----------|---------------|
| Clear      | Generate Collection | Print     | Fwd Refs | Bkwd Refs | Generate OACS |
| Terms      |                     | Documents |          |           |               |
| L28 and L6 |                     | 1         |          |           |               |

Display Format: [-]

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## Hit List

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|               |       |                     |       |          |           |
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| First Hit     | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs |
| Generate OACS |       |                     |       |          |           |

Search Results - Record(s) 1 through 6 of 6 returned.

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1. Document ID: US 6708088 B2

L25: Entry 1 of 6

File: USPT

Mar 16, 2004

US-PAT-NO: 6708088

DOCUMENT-IDENTIFIER: US 6708088 B2

TITLE: Vehicle behavior control apparatus

|      |       |          |       |        |                |      |           |           |             |        |      |          |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KM/C | Draw. De |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|

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2. Document ID: US 5502639 A

L25: Entry 2 of 6

File: USPT

Mar 26, 1996

US-PAT-NO: 5502639

DOCUMENT-IDENTIFIER: US 5502639 A

TITLE: Controlling apparatus of steering angle of rear wheels of four-wheel steering vehicle

|      |       |          |       |        |                |      |           |           |             |        |      |          |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KM/C | Draw. De |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|

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3. Document ID: US 4720790 A

L25: Entry 3 of 6

File: USPT

Jan 19, 1988

US-PAT-NO: 4720790

DOCUMENT-IDENTIFIER: US 4720790 A

TITLE: Apparatus for controlling steer angle of rear wheels of vehicle

|      |       |          |       |        |                |      |           |           |             |        |      |          |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KM/C | Draw. De |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|

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4. Document ID: US 6708088 B2, US 20020153770 A1, JP 2002316546 A, EP 1256499 A2

L25: Entry 4 of 6

File: DWPI

Mar 16, 2004

DERWENT-ACC-NO: 2003-018490

DERWENT-WEEK: 200420

COPYRIGHT 2006 DERWENT INFORMATION LTD

TITLE: Vehicle behavior control apparatus for calculating target yaw rate, has target yaw rate calculator which computes target yaw rate based on computed stability factor when turning to left or right

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Drawn De](#)

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5. Document ID: EP 470630 A, KR 9607419 B1, US 5274555 A, EP 470630 A3, EP 470630 B1, DE 69116951 E, US 5502639 A

L25: Entry 5 of 6

File: DWPI

Feb 12, 1992

DERWENT-ACC-NO: 1992-050690

DERWENT-WEEK: 199919

COPYRIGHT 2006 DERWENT INFORMATION LTD

TITLE: Rear wheels steering angle controlling appts. - controls steering angle of rear wheels of four wheel steering vehicle and provides quick response of electric motor when necessary

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Drawn De](#)

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6. Document ID: EP 165706 A, DE 3564235 G, EP 165706 B, US 4720790 A

L25: Entry 6 of 6

File: DWPI

Dec 27, 1985

DERWENT-ACC-NO: 1986-001263

DERWENT-WEEK: 198601

COPYRIGHT 2006 DERWENT INFORMATION LTD

TITLE: Vehicle rear wheel steering angle control appts. - steers rear wheels in direction counter to front wheels when steering wheel is operated at high speed

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Drawn De](#)

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| Terms      | Documents |
|------------|-----------|
| L16 or L17 | 6         |

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## The Contents of Case 10691670

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| Qnum | Query   | DB Name                            | Thesaurus | Operator | Plural |
|------|---|------------------------------------|-----------|----------|--------|
| Q1   | steer\$ near2 angle   | PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD | ASSIGNEE  | OR       | YES    |
| Q2   | ((steer\$ near2 angle) with sens\$) and (rotat\$ with angle)        | USPT                               | ASSIGNEE  | OR       | YES    |
| Q3   | Q2 and accelerat\$ and (left\$ near2 wheel) and (right near2 wheel) | USPT                               | ASSIGNEE  | OR       | YES    |
| Q4   | Q3 and accelerat\$ and (yaw near2 rate)                             | USPT                               | ASSIGNEE  | OR       | YES    |
| Q5   | Q4 and @ad<=20021029  | USPT                               | ASSIGNEE  | OR       | YES    |
| Q6   | Q5 and (angl\$ with turn\$ with ratio)                              | USPT                               | ASSIGNEE  | OR       | YES    |
| Q7   | Q6 and (steer\$ near2 angle).clm.                                   | USPT                               | ASSIGNEE  | OR       | YES    |
| Q8   | Q7 and (rotat\$ with angl\$).clm.                                   | USPT                               | ASSIGNEE  | OR       | YES    |
| Q9   | Q2 and @ad<=20021029  | USPT                               | ASSIGNEE  | OR       | YES    |
| Q10  | Q9 and (front\$ with rear\$)  | USPT                               | ASSIGNEE  | OR       | YES    |
| Q11  | Q10 and (ratio\$ with (turn\$ or rotat\$) with angle)               | USPT                               | ASSIGNEE  | OR       | YES    |
| Q12  | Q11 and accelerat\$ and (yaw near2 rate)                            | USPT                               | ASSIGNEE  | OR       | YES    |
| Q13  | Q12 and (left\$ with right\$ with wheel\$)                          | USPT                               | ASSIGNEE  | OR       | YES    |
| Q14  | Q13 and (steer\$ near2 angle).clm.                                  | USPT                               | ASSIGNEE  | OR       | YES    |
| Q15  | Q14 and (tim\$ near2 averag\$)                                      | USPT                               | ASSIGNEE  | OR       | YES    |
| Q16  | Q13 and 701/36,41.ccls.   | USPT                               | ASSIGNEE  | OR       | YES    |

|     |                                |      |          |    |     |
|-----|--------------------------------|------|----------|----|-----|
| Q17 | Q16 not (Q8 or Q15)            | USPT | ASSIGNEE | OR | YES |
| Q18 | Q17 and (tim\$ near2 averag\$) | USPT | ASSIGNEE | OR | YES |
| Q19 | Q8 and (tim\$ near2 averag\$)  | USPT | ASSIGNEE | OR | YES |
| Q20 | 5589815.pn.                    | USPT | ASSIGNEE | OR | YES |
| Q21 | Q20 and (tim\$ near2 averag\$) | USPT | ASSIGNEE | OR | YES |

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**Case Operation**

SHOW FILES

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File 266:FEDRIP 2005/Dec  
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File 2:INSPEC 1898-2006/Feb W2  
(c) 2006 Institution of Electrical Engineers

?

```
S (ZERO? (W) POWER? (W) CONTROL?) AND HYBRID? AND PD<=030812
>>>One or more prefixes are unsupported
>>> or undefined in one or more files.
>>>File 25 processing for PD=  : PD=030812
>>>     started at PD=19080000 stopped at PD=19920106
>>>File 63 processing for PD=  : PD=030812
>>>     started at PD=DATED stopped at PD=19680517
>>>File 81 processing for PD=  : PD=030812
>>>     started at PD=19390728 stopped at PD=19920325
        420124  ZERO?
        2534249  POWER?
        4252951  CONTROL?
        126  ZERO? (W) POWER? (W) CONTROL?
        353242  HYBRID?
        1602215  PD<=030812
S2      0  (ZERO? (W) POWER? (W) CONTROL?) AND HYBRID? AND
        PD<=030812
```

?

1/3, KWIC/1 (Item 1 from file: 95)  
DIALOG(R) File 95:TEME-Technology & Management  
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01705484 20021206714

**A transfer-function approach to the analysis and design of zero-power controllers for magnetic suspension systems**

Mizuno, T; Takemori, Y

Saitama Univ., Urawa, J

Electrical Engineering in Japan, v141, n2, pp67-75, 2002

Document type: journal article Language: English

Record type: Abstract

ISSN: 0424-7760

**A transfer-function approach to the analysis and design of zero - power controllers for magnetic suspension systems**

2002

**ABSTRACT:**

A transfer function approach is applied to the analysis and design of zero - power controllers for magnetic suspension systems. The general structures of controllers achieving zero - power control are derived for both current- and voltage-controlled magnetic suspension systems. For the former type...

...the self-sensing suspension also achieves zero-power characteristics automatically. A direct synthesis method for zero - power control is developed based on the analysis. Several experiments are carried out with a single-degree...

1/3, KWIC/2 (Item 2 from file: 95)  
DIALOG(R) File 95:TEME-Technology & Management  
(c) 2006 FIZ TECHNIK. All rts. reserv.

00949710 I95128108303

**Dynamic analysis of the Maglev system using controlled-PM electromagnets and robust zero-power-control strategy**

(Dynamische Analyse eines Magnetschwebesystems mit geregelten Elektrodauermagneten und robuster Nulleistungsregelstrategie)

Yeou-Kuang Tzeng; Wang, TC

Dept. of Electr. Eng., Nat. Tsing Hua Univ., Hsinchu, Taiwan

INTERMAG '95. 1995 IEEE International Magnetics Conference, 18-21 April 1995, San Antonio, TX, USA IEEE Transactions on Magnetics, v31, n6, PT.2, pp4211-4213, 1995

Document type: journal article Language: English

Record type: Abstract

ISSN: 0018-9464

**Dynamic analysis of the Maglev system using controlled-PM electromagnets and robust zero - power - control strategy**

1995

**ABSTRACT:**

...presents a rigorous dynamic analysis for a Maglev system with controlled-PM electromagnets and robust zero power control strategy. A variable structure control theory using the new reaching law method is applied to...

**IDENTIFIERS: FREQUENCY DOMAIN SYNTHESIS; MAGNETIC LEVITATION; VARIABLE**

STRUCTURE SYSTEMS; MAGLEV SYSTEM; CONTROLLED PM ELECTROMAGNETS; ROBUST  
ZERO POWER CONTROL; DYNAMIC ANALYSIS; VARIABLE STRUCTURE CONTROL  
THEORY; REACHING LAW METHOD; ROBUST CONTROLLER SYNTHESIS; CONTROL VOLTAGE  
CHATTERING...

?

S (ZERO? (W) POWER? (W) CONTROL?) AND PD<=030812  
>>>One or more prefixes are unsupported  
>>> or undefined in one or more files.  
>>>File 25 processing for PD= : PD=030812  
>>> started at PD=19080000 stopped at PD=19920106  
>>>File 63 processing for PD= : PD=030812  
>>> started at PD=DATED stopped at PD=19680517  
>>>File 81 processing for PD= : PD=030812  
>>> started at PD=19390728 stopped at PD=19920325  
Processing  
    420124  ZERO?  
    2534249  POWER?  
    4252951  CONTROL?  
    126  ZERO? (W) POWER? (W) CONTROL?  
    1602215  PD<=030812  
S1          2  (ZERO? (W) POWER? (W) CONTROL?) AND PD<=030812  
?

Application Number  **SEARCH**

IDS Flag Clearance for Application

**IDS  
Information**

| Content | Mailroom Date | Entry Number | IDS Review                          | Reviewer                     |
|---------|---------------|--------------|-------------------------------------|------------------------------|
| M844    | 11-07-2003    | 13           | <input checked="" type="checkbox"/> | 08-11-2005 00:41:15 IDS CONV |
| M844    | 09-30-2004    | 14           | <input checked="" type="checkbox"/> | 08-11-2005 00:41:15 IDS CONV |

**UPDATE**